APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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PRICE, NATHAN E

ART UNIT	PAPER NUMBER
2194	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/750,413	SOSNOVSKY ET AL.
	Examiner	Art Unit	
	Nathan Price	2194	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _20 July 2007_.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-13,16-31 and 34-39_ is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-13,16-31 and 34-39_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

     1.☐ Certified copies of the priority documents have been received.

     2.☐ Certified copies of the priority documents have been received in Application No. _____.

     3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

WILLIAM THOMSON
SUPERVISORY PATENT EXAMINER

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   This Office Action is in response to communications received 20 July 2007.

Claims 1-13,16-31 and 34-39 are pending. Previous objections and rejections not

included in this Office Action have been withdrawn.

Response to Arguments

2.   Applicant's arguments filed 20 July 2007 regarding previous objections and

rejections that are maintained in this Office Action have been fully considered but they

are not persuasive.

3.   Regarding the rejections of claims 24 – 31 and 34 – 36 under 35 U.S.C. 101, the

processor based set of instructions does not solve the problem of the claims being

software, per se.

4.   Regarding the prior art rejections, Applicant argues Silberschatz fails to teach an

API as claimed. Examiner respectfully disagrees. Silberschatz teaches an API to

enable user applications to use the timers (page 416 last ¶). Applicant further argues,

"...the claimed timer operates within the PC of a thread..." (see REMARKS, page 14

¶1). However, the claims do not appear to recite this feature. Upon review of

Applicant's original disclosure, it appears that the original disclosure fails to support this

argued, but not claimed, feature. Applicant's specification discloses applications

utilizing timer functionality, but the timer functionality appears to be implemented by the

OS (specification: page 18 lines 18 – 23; page 22 lines 18 – 21). For the reasons given

in the current rejections, Silberschatz teaches an API to enable user applications to use

and control the timers as claimed.

Claim Objections

5.   Claim 39 is objected to because of the following informalities: the meaning of

"OS" is not clearly indicated. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of
> making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the
> art to which it pertains, or with which it is most nearly connected, to make and use the same and shall
> set forth the best mode contemplated by the inventor of carrying out his invention.

6.   Claim 39 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply

with the written description requirement. The claim(s) contains subject matter which

was not described in the specification in such a way as to reasonably convey to one

skilled in the relevant art that the inventor(s), at the time the application was filed, had

possession of the claimed invention. The amendment to claim 39 adds "the timer

stored in a local timer table corresponding to a particular program counter responsive to

a scheduler of a native OS" in lines 6 – 8. Specifically, the original disclosure does not

appear to support the recited program counter as claimed.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7.   Claims 24 – 31 and 34 – 36 are rejected under 35 U.S.C. 101 because the

claimed invention is directed to non-statutory subject matter.

8.   Claims 24 – 31 and 34 – 36 appear to recite elements that can be implemented

in software alone and are therefore rejected as software, per se. See MPEP 2106.01.

It appears that the claims do not include hardware necessary to realize the functionality

of the software. The claims are therefore rejected as being directed toward non-

statutory subject matter.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9.   Claims 1 – 11, 13 – 18, 21 and 23 – 38 are rejected under 35 U.S.C. 102(b) as

being anticipated by Silberschatz (see PTO-892 mailed with this Office Action).

10.   As to claim 1, Silberschatz teaches a method for processing timer events, the

method comprising:

receiving a timer subscription containing a time value and an identity of a module

to notify upon expiration of the time value (section 12.3.3);

establishing a timer to track expiration of the time value (section 12.3.3);

detecting expiration of the timer (section 12.3.3);

in response to detecting expiration of the timer, determining if the module is

disabled, and if the module is disabled, enabling the module (sections 12.3.3; 4.1.2;

4.2.1), enabling modules corresponds to activation of a corresponding component by an

activation mechanism (sections 6.1.4; 4.1.3), disabling corresponds to deactivation of

the corresponding component by the activation mechanism, the activation and

deactivation operations operable to reduce memory consumption by inactive

components and provide selective invocation to maintain availability of the component

(sections 6.1.4; 4.1.3; 9.2 ¶ 1 – 4); and

notifying a subscriber in the module of expiration of the timer (section 12.3.3),

enabling and disabling being performed at a level of granularity of the modules, each of

the modules corresponding to a component and operable be enabled and disabled by

activation and deactivation of the corresponding component (sections 4.1.4; 4.2.3; 5.1;

9.2).

11.   As to claim 2, Silberschatz teaches the module includes a timer handler in the

subscriber, the timer subscription further indicative of the timer handler, and notifying

the subscriber of the expiration of the timer further comprises invoking the indicated

timer handler for execution (sections 12.2.2; 12.3.3; 4.1.2; 4.2.1).

12.   As to claim 3, Silberschatz teaches establishing the timer further comprises:

adding the identity of the module to a global timer map, the global timer map operable to

indicate a plurality of modules; and adding a reference to the subscriber including the

timer handler into a local timer map associated with the module (sections 12.3.3; 4.1.3).

13.   As to claim 4, Silberschatz teaches invoking further comprises: indexing, via the

local timer map, a dispatch command operable to dispatch the timer handler (sections

6.1.4; 4.1.3).

14.   As to claim 5, Silberschatz teaches the local timer map includes an entry

indicative of the subscriber including the timer handler within a module and the global

timer map includes an entry indicative of the module (sections 12.3.3; 4.1.3).

15.   As to claim 6, Silberschatz teaches the reference is a dynamic offset from a base

to the location in a particular instantiation of the module, the base operable to change

upon reenablement of the module (sections 4.1.3; 9.1.1; 9.1.2; 9.2 ¶ 3).

16.   As to claim 7, Silberschatz teaches the expiration of the timer and resulting timer

initiated invocation of the timer handler is independent of the enablement of the

subscriber including the timer handler (sections 6.1.3; 4.1.3; 12.3.3).

17.   As to claim 8, Silberschatz teaches determining if the module is disabled further

comprises: employing the global timer map to find the entry corresponding to the timer

expiration to determine the identity of the module corresponding to the timer event; and

determining, from the identity of the module, if the module is disabled (sections 12.3.3;

4.1.3; 4.2.1).

18.   As to claim 9, Silberschatz teaches the timer subscription is operable to indicate

periodic and aperiodic expiration times (section 12.3.3).

19.   As to claim 10, Silberschatz teaches the subscription is received from a

subscriber within the module, the subscriber including the timer handler (section 4.1.3).

20.   As to claim 11, Silberschatz teaches receiving the subscription further comprises

receiving a subscription from multiple subscribers in the module, each subscriber

operative to include a timer handler, further comprising, in response to detecting

expiration of the timer, enabling disabled modules upon expiration of a timer subscribed

to by any of the multiple subscribers (sections 12.3.3; 4.1.4; 5.1; 5.2).

21.   As to claim 13, Silberschatz teaches resetting the expiration time value with an

expiration time value from a second subscription for the same timer (section 12.3.3).

22.   As to claim 16, Silberschatz teaches activation and deactivation further

comprises identifying, in a module server in communication with each of the modules,

when to activate and deactivate modules based on information in the global timer map

in a component server (section 12.3.3).

23.   As to claim 17, Silberschatz teaches each of the modules is operable to include a

plurality of threads, and disabling is performed by a thread manager operable to

gracefully terminate each of the threads prior to deactivation, deactivation occurring by

informing each of the threads of the termination and computing when each thread has

attained a termination point (section 9.2).

24.   As to claim 18, Silberschatz teaches associating the timer with a generation

counter, the generation counter incrementally labeling each invocation from a particular

subscriber; comparing, upon completion of a timer handler, the generation counter;

canceling, if the generation counter indicates that the timer handler corresponds to the

generation counter, the timer; and maintaining, if the timer is periodic, the pending timer

corresponding to the subscriber (section 12.3.3).

25.   As to claim 21, see the rejection of claims 1, 2 and 11.

26.   As to claims 24, 37 and 38, see the rejection of claim 1.

27.   As to claims 23 and 25, see the rejection of claim 2.

28.   As to claims 26 – 31 and 34 – 36, see the rejection of claims 4, 3, 5 – 7, 10 and

16 – 18, respectively.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

29.   Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Silberschatz in view of the fifth edition of the Microsoft Computer Dictionary (see PTO-

892 mailed with this Office Action).

30.   As to claim 39, see the rejection of claim 1. Additionally, Silberschatz teaches

the timer is stored in a local timer list corresponding to a particular program counter

responsive to a scheduler of a native OS (sections 4.2.2, 12.3.3). Silberschatz fails to

specifically teach the timer is stored in a local timer table. However, in view of the definition of "table" in the Microsoft Computer Dictionary, it would have been obvious to one of ordinary skill in the art to store the timer in a local timer table. It would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to combine these teachings because Silberschatz teaches operating systems for computers and the referenced dictionary is a computer dictionary.

31.   Claims 12, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Silberschatz as applied to claim 1 above, and further in view of Flanagan (see PTO-892 mailed 20 April 2007).

32.   As to claim 12, Silberschatz fails to specifically teach multiple subscriptions to a timer by specifying the timer name as claimed. However, Flanagan teaches the subscription is a first subscription and includes a timer identity, further comprising receiving second subscription to the same timer as first subscription, the timer identified by a timer name provided by both the first subscription and the second subscription (page 536 ¶ 4). It would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to combine these teachings because both references teach using timers in computer programming.

33.   As to claim 19, Silberschatz teaches associating the timer identity with a timer handler occurs in a native language of the timer handler and corresponding subscriber,

and avoids a corresponding definition in an external interface language, the external

interface language for generating timer specific code (sections 12.3.3; 3.3 ¶ 3).

34.   As to claim 20, Silberschatz teaches the external interface language is an

Interface Definition Language (section 15.4; page 519).

35.   Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Silberschatz as applied to claim 21 above, and further in view of Mann (US Pat.

5,644,772).

36.   As to claim 22, Silberschatz fails to specifically teach a queue as claimed.

However, Mann teaches, following selectively enabling: enqueuing an indication of the

timer expiration in a queue, the queue corresponding to a process including the module

containing the subscriber; and assigning, to a particular thread corresponding to the

queue, performance of the timer handler corresponding to the expired timer (col. 6 lines

1 – 15; col. 9 line 66 – col. 10 line 8; col. 12 lines 57 – 67). It would have been obvious

to one of ordinary skill in the art at the time Applicant's invention was made to combine

these teachings because both address timers and interrupts.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.
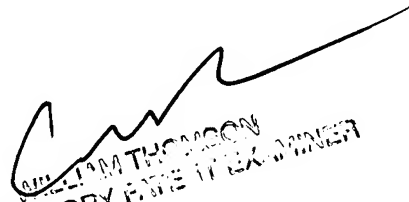
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan Price whose telephone number is (571) 272-4196. The examiner can normally be reached on 6:00am - 2:30pm, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Thomson can be reached on (571) 272-3718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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